

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 15. (canceled)

16. (currently amended) A metal powder composition for use in selective laser sintering, comprising:

- an iron-based powder material;
- a nickel and/or nickel alloy powder material;
- a copper and/or copper alloy powder material; and
- a graphite powder material;

wherein at least one of a condition that the iron-based powder material comprises a chrome molybdenum steel powder material and a condition that the copper alloy powder material comprises a copper manganese alloy powder material is satisfied and wherein a proportion of the chrome molybdenum steel powder material ranges from 60 weight percent to 80 weight percent, a proportion of the nickel powder material ranges from 15 weight percent to 25 weight percent, a proportion of the copper manganese alloy powder material ranges from 5 weight percent to 15 weight percent, and a proportion of the graphite powder material ranges from 0.2 weight percent to 0.75 weight percent.

17. (cancelled)

18. (previously presented) The metal powder composition of claim 16, wherein the iron-based powder material has an average particle diameter less than that of the nickel and/or nickel alloy powder material and that of the copper and/or copper alloy powder material.

19. (previously presented) The metal powder composition of claim 18, wherein the average particle diameter of the iron-based powder material is less than about three quarters of that of the nickel and/or nickel alloy powder material and the copper and/or copper alloy powder material.

20. (previously presented) The metal powder composition of claim 16, wherein the metal powder composition comprises granulated powder.

21. (cancelled)

22. (cancelled)

23. (previously presented) A metal powder composition for use in selective laser sintering, comprising:

an iron-based powder material;

a nickel and/or nickel alloy powder material;

a copper and/or copper alloy powder material; and
a graphite powder material;

wherein each of the iron-based powder material, the nickel and/or nickel alloy powder material, and the copper and/or copper alloy powder material has an average particle diameter ranging from 5 μm to 50 μm ; and

wherein the iron-based powder material is mainly composed of aspherical particles, while each of the nickel and/or nickel alloy powder material and the copper and/or copper alloy powder material is mainly composed of spherical particles.

24. (previously presented) The metal powder composition of claim 23, wherein a proportion of the graphite powder material ranges from 0.2 weight percent to 1.0 weight percent.

25. (previously presented) The metal powder composition of claim 23, wherein a proportion of the iron-based powder material ranges from 60 weight percent to 90 weight percent, a proportion of the nickel and/or nickel alloy powder material ranges from 5 weight percent to 35 weight percent, and a proportion of the copper and/or copper alloy powder material ranges from 5 weight percent to 15 weight percent.

26. (previously presented) The metal powder composition of claim 23, wherein the iron-based powder material has an average particle diameter less than that of the nickel and/or nickel alloy powder material and that of the copper and/or copper alloy powder material.

27. (previously presented) The metal powder composition of claim 23, wherein the average particle diameter of the iron-based powder material is less than about three quarters of that of the nickel and/or nickel alloy powder material and the copper and/or copper alloy powder material.

28. (previously presented) The metal powder composition of claim 23, wherein the iron-based powder material comprises a chrome molybdenum steel powder material having an average particle diameter of less than 25 μm .

29. (previously presented) The metal powder composition of claim 23, wherein the graphite powder material comprises particles having a maximum length less than the average particle diameter of the iron-based powder material.

30. (previously presented) The metal powder composition of claim 23, wherein the metal powder composition comprises granulated powder.

31. (previously presented) The metal powder composition of claim 23, further comprising a carbide-producing element mixed therein.

32. (previously presented) A method of making a metal powder composition according to claim 23, comprising:

preparing an iron-based powder material;

preparing a nickel and/or nickel alloy powder material;

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preparing a copper and/or copper alloy powder material;

mixing the iron-based powder material, the nickel and/or nickel alloy powder material, and the copper and/or copper alloy powder material;

mixing graphite flakes in a mixture of the iron-based powder material, the nickel and/or nickel alloy powder material, and the copper and/or copper alloy powder material; and

crushing a resultant mixture.

33. (new) A metal powder composition for use in selective laser sintering, comprising:

an iron-based powder material;

a nickel and/or nickel alloy powder material;

a copper and/or copper alloy powder material; and

a graphite powder material;

wherein at least one of a condition that the iron-based powder material comprises a chrome molybdenum steel powder material and a condition that the copper alloy powder material comprises a copper manganese alloy powder material is satisfied and wherein the composition further comprises a carbide-producing element mixed therein.